WHAT IS CLAIMED IS:

1. A method for providing a pre-paid service to a mobile station for data transmission in a packet data cellular telecommunication network, the method comprising the steps of:

establishing a connection between the mobile station and a

5   service node in the packet data cellular telecommunication network;

responsive to the establishment of the connection, obtaining from a subscriber account database at least one pre-paid connection limit parameter indicative of a limit at which the connection must be terminated; and

10   monitoring at the service node the connection to determine whether the data transmission exceeds the at least one pre-paid connection limit parameter, and if so, terminating the connection.

2. The method as in claim 1, wherein the at least one pre-paid connection limit parameter includes a pre-paid connection time limit parameter.

3. The method as in claim 2, wherein the pre-paid connection time limit parameter is a parameter indicative of a maximum duration of the connection.

4. The method as in claim 3, wherein monitoring of at least one current connection parameter is performed by comparing a current duration of the connection with the pre-paid connection time limit parameter.

5. The method as in claim 1, wherein the at least one pre-paid connection limit parameter includes a pre-paid connection traffic limit parameter.

6. The method as in claim 5, wherein the pre-paid connection traffic limit parameter is a parameter indicative of a maximum amount of data that can be transmitted over the connection.

7. The method as in claim 6, wherein the pre-paid connection traffic limit parameter limits the amount of data that can be transmitted up-link over the connection.

8. The method as in claim 6, wherein the pre-paid connection traffic limit parameter limits the amount of data that can be transmitted down-link over the connection.

9.   The method as in claim 6, wherein the pre-paid connection traffic limit parameter limits the total amount of data that is to be transmitted over the connection.

10.   The method as in claim 6, wherein a quantitative unit of the pre-paid connection traffic limit parameter is selected from a group of quantitative units consisting of: packets, frames, bytes and bits.

11.   The method as in claim 6, wherein monitoring of at least one current connection parameter is performed by comparing a current amount of data transmitted over the connection with the pre-paid connection traffic limit parameter.

12.   The method as in claim 1, wherein:

the connection between the mobile station and the service node in the packet data cellular telecommunication network is established through a radio access network;

5   the connection is a Point-to-Point (PPP) connection;

the packet data cellular telecommunication network is an Internet Protocol (IP) network;

the packet data cellular telecommunication network is accessed via a Packet Data Service Node (PDSN) in a CDMA2000 network;

10   and the subscriber account database is co-located with a RADIUS.

27

13. The method as in claim 12, wherein the subscriber account database is co-located with a DIAMETER server.

14. The method as in claim 12, wherein the subscriber account database is located in a remote node in the packet data cellular telecommunication network.

15. The method as in claim 1, wherein before the exceeding of the at least one pre-paid connection limit parameter, the mobile station increases the value of said at least one pre-paid connection limit parameter.

16. The method as in claim 15, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter via a web site.

17. The method as in claim 15, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter by selecting via a graphical user interface one of a predefined additional amount of data which can be transmitted over the connection and a predefined additional amount of time for which the connection can be maintained.

18. The method as in claim 15, wherein the mobile station increases the value of the at least one pre-paid connection limit parameter by specifying via a graphical user interface one of a predefined additional amount of data which can be transmitted over the connection and a predefined additional amount of time for which the connection can be maintained.

19. The method as in claim 15, wherein the mobile station is notified when a predefined value of the at least one pre-paid connection limit parameter is attained.

20. A system for providing a pre-paid connection service for data transmission to a mobile station in a packet data cellular telecommunication network, the system comprising:

a subscriber account database for storing for the mobile station,

5   at least one pre-paid connection limit parameter; and

a service node for:

supporting the establishment of a connection between the mobile station and the packet data cellular telecommunication network;

10   obtaining from the subscriber account database the at least one pre-paid connection limit parameter; and

during the connection, determining whether the data transmission exceeds the at least one pre-paid connection limit parameter and if so, terminating the connection.

21. The system as in claim 20, wherein the at least one pre-paid connection limit parameter includes a pre-paid connection time limit parameter.

22. The system as in claim 21, wherein the pre-paid connection time limit parameter is a parameter indicative of a maximum duration of the connection.

23. The system as in claim 22, wherein monitoring of at least one current connection parameter is performed by comparing a current duration of the connection with the pre-paid connection time limit parameter.

24. The system as in claim 20, wherein the at least one pre-paid connection limit parameter includes a pre-paid connection traffic limit parameter.

25. The system as in claim 24, wherein the pre-paid connection traffic limit parameter is a parameter indicative of a maximum amount of data that can be transmitted over the connection.

26. The system as in claim 25, wherein the pre-paid connection traffic limit parameter limits the amount of data that can be transmitted up-link over the connection.

27. The system as in claim 25, wherein the pre-paid connection traffic limit parameter limits the amount of data that can be transmitted down-link over the connection.

28. The system as in claim 25, wherein the pre-paid connection traffic limit parameter limits the total amount of data that can be transmitted over the connection.

29. The system as in claim 25, wherein a quantitative unit of the pre-paid connection traffic limit parameter is selected from a group of quantitative units consisting of: packets, frames, bytes and bits.

30. The system as in claim 25, wherein monitoring of at least one current connection parameter is performed by comparing a current amount of data transmitted over the connection with the pre-paid connection traffic limit parameter.

31. The system as in claim 20, wherein:

the service node manages the connection between the mobile station and the packet data cellular telecommunication network;

the connection is a Point-to-Point (PPP) connection;

5   the packet data cellular telecommunication network is an Internet Protocol (IP) network;

the packet data cellular telecommunication network is accessed via a Packet Data Service Node (PDSN) in a CDMA2000 network; and the subscriber account database is co-located with a RADIUS.

32. The system as in claim 31, wherein the subscriber account database is co-located with a DIAMETER server.

33. The system as in claim 31, wherein the subscriber account database is located in a remote node in the packet data cellular telecommunication network.

34. The system as in claim 20, wherein before the exceeding of the at least one pre-paid connection limit parameter, the mobile station increases the value of said at least one pre-paid connection limit parameter.

35. The system as in claim 34, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter via a web site.

36. The system as in claim 35, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter by selecting via a graphical user interface one of a predefined additional amount of data which can be transmitted over the connection and a predefined additional amount of time for which the connection can be maintained.

37. The system as in claim 35, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter by specifying via a graphical user interface one of a predefined additional amount of data which can be transmitted over

5   the connection and a predefined additional amount of time for which the connection can be maintained.

38. The system as in claim 34, wherein the mobile station is notified when a predefined value of the at least one pre-paid connection limit parameter is attained.

39. A service node for monitoring a PPP connection between a mobile station transmitting data and a packet data cellular telecommunication network, the service node comprising:

a PPP stack, activated upon an establishment of the PPP

5   connection between the mobile station and the packet data telecommunication network;

a memory for storing at least one pre-paid connection limit parameter; and

a processor for comparing the transmitted data with the at least

10 one pre-paid connection limit parameter, wherein the processor terminates the PPP connection if the transmitted data exceeds the at least one pre-paid connection limit parameter.

40. The service node as in claim 39, wherein the at least one pre-paid connection limit parameter includes a pre-paid connection time limit parameter.

41. The service node as in claim 40, wherein the pre-paid connection time limit parameter is a parameter indicative of a maximum duration of the PPP connection.

42. The service node as in claim 41, wherein monitoring of at least one current connection parameter is performed by comparing a current duration of the PPP connection with the pre-paid connection time limit parameter.

43. The service node as in claim 39, wherein the at least one pre-paid connection limit parameter includes a pre-paid connection traffic limit parameter.

44. The service node as in claim 43, wherein the pre-paid connection traffic limit parameter is a parameter indicative of an amount of data that can be transmitted over the PPP connection.

45. The service node as in claim 44, wherein the pre-paid connection traffic limit parameter limits the amount of data that can be transmitted up-link over the PPP connection.

46. The service node as in claim 44, wherein the pre-paid connection traffic limit parameter limits the amount of data that can be transmitted down-link over the PPP connection.

47. The service node as in claim 44, wherein the pre-paid connection traffic limit parameter limits the total amount of data that can be transmitted over the PPP connection.

48. The service node as in claim 44, wherein a quantitative unit of the pre-paid connection traffic limit parameter is selected from a group of quantitative units consisting of: packets, frames, bytes and bits.

49. The service node as in claim 44, wherein monitoring of at least one current pre-paid connection parameter is performed by comparing a current amount of data transmitted over the PPP connection with the pre-paid connection traffic limit parameter.

50. The service node as in claim 39, wherein:

the PPP connection between the mobile station and the packet data cellular telecommunication network is established through a radio access network;

the packet data cellular telecommunication network is an Internet Protocol (IP) network;

the packet data cellular telecommunication network is accessed via a Packet Data Service Node (PDSN) in a CDMA2000 network; and

the subscriber account database is co-located with a RADIUS.

51. The service node as in claim 50, wherein the subscriber account database is co-located with a DIAMETER server.

52. The service node as in claim 50, wherein the subscriber account database is located in a remote node in the packet data cellular telecommunication network.

53. The service node as in claim 39, wherein before the exceeding of the at least one pre-paid connection limit parameter, the mobile increases the value of said at least one pre-paid connection limit parameter.

54. The service node as in claim 53, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter via a web site.

55. The service node as in claim 54, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter by selecting via a graphical user interface one of a predefined additional amount of data which can be transmitted over the connection and a predefined additional amount of time for which the connection can be maintained.

56. The service node as in claim 54, wherein the mobile station increases the value of said at least one pre-paid connection limit parameter by specifying via a graphical user interface one of a predefined additional amount of data which can be transmitted over the connection and a predefined additional amount of time for which the connection can be maintained.

57. The service node as in claim 53, wherein the mobile station is notified when a predefined value of the at least one pre-paid connection limit parameter is attained.